Comments on Low Impact Development Draft Permit Language

Below are my comments on Ecology's draft NPDES permit language. I focused on the LID portions, given my involvement in the LID Advisory Committees. Please don't hesitate to ask for clarification on any of these points if needed. Thanks-

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1. Performance Standard – The performance standard option should not allow use of non-LID facilities. As written, the performance standard option does not meet the PCHB's intent of LID to the MEF, and likewise ignores the ancillary benefits of LID relative to traditional methods.
2. Mandatory List – Merge the mandatory list option with the performance standard option. That is, require the performance standard, and for project types where Ecology proposes to allow the mandatory list, simply allow proponents to only use those BMPs that are feasible. This will be simpler and clearer, and in practice is how the assessment will be performed anyway – i.e., designers will asses feasibility and will choose the mandatory list option if they have feasibility constraints. I do not see a significant advantage to making these separate options.
3. Bioretention vs. Rain Garden – I like the idea of distinguishing between bioretention and rain gardens, but I'm concerned it's too late for Ecology to dictate how these very interchangeable terms are used. It could cause considerable confusion and frustration in the region.
4. Private Facility Concerns – I hope I'm not wrong, but the concerns about the increase in private parcel-scale stormwater facilities and anticipated failure due to faulty design and O&M seem overstated. While I do not expect all parcel-scale facilities to function as designed, or even survive beyond a year or two, the actual risks seem low. Consider that currently we have hundreds of thousands of rooftops draining directly to lawns, driveways, etc. Under the worst-case scenario (i.e., rampant LID failures), won't it look a lot like it does in many existing cities already? That is not ideal and is not my hope, but it's not catastrophic either. See also next comment.
5. LID O&M – A public outreach and education campaign should be developed, focused on LID O&M on smaller parcels. In addition, we should look to septic system installations (not to mention underground oil tanks, and even irrigation systems and backflow prevention) for lessons learned on installation, inspection, certification, and long-term operation of LID on single-family and parcel-scale properties. Don't reinvent the wheel.
6. Watershed-scale Planning – The watershed-scale planning approach is admirable and does do a good job of looking at impacts beyond new and redevelopment. However, it

falls short of the PCHB's intent. It is also misleading to call it "watershed-scale planning" as it is specifically focused on the impacts of the discrete action, not the overall watershed conditions. Moreover, many jurisdictions will be able to claim the action itself could result in a net benefit (assuming application of current stormwater standards to the future development). Despite the many concerns and challenges Ecology outlined in the explanatory notes (and in some cases, consistent with them!), watershed-scale stormwater planning is the most cost-effective long-term means of avoiding and mitigating water resource impacts. Ecology should take a more direct approach such as: 1) develop guidance on watershed planning methods and requirements, 2) require jurisdictions to prioritize basins (this was already required in the current permits), 3) approve and/or prioritize the watersheds (contract with a 3rd party if needed), 4) require plan development by the jurisdictions, 5) approve the plans, and 6) require implementation. This is a long-term process, but the sooner we start the sooner we can realize the many benefits. The PCHB also expects this to happen.

7. Minimum Requirement #5 – I believe permeable pavement should be included in the list of applicable BMPs, excluding roadway applications.
8. Minimum Requirement #5, Small Projects Meeting the Performance Standard – I recommend that small projects be allowed to demonstrate compliance with the performance standard in lieu of demonstrating use of the specified list of BMPs, but only AFTER the regional LID sizing tool is updated using the eventual Ecology LID performance standard.
9. Minimum Requirement #5 – It is not clear to me, but I assume the MEF assessment for MR5 will use the same criteria outlined in Section 8?
10. Section 8 Feasibility– I think Ecology developed a very good list, but you should include a process for local governments to get other feasibility criteria approved (or denied for that matter) by Ecology. I suspect other valid feasibility issues will arise in implementation, but right now it's not clear how those would be handled.
11. Section 8 feasibility considerations – The hard cutoff for bioretention infiltration feasibility at 0.15in/hr should be revisited. Lower rates are feasible for facilities in series (e.g., green roof draining to bioretention), or small areas draining to facilities, or facilities not designed to meet a performance standard. It IS a big issue and concern, but if possible, soften the hard cutoff at 0.15in/hr. For permeable pavement, perform some continuous model runs to see when (e.g., at what infiltration rate) perm pavement begins to get overwhelmed from back to back storms. Intuitively, it should be functional with a considerably lower infiltration rate (I believe the WSU LID Manual committee, or modeling subcommittee, has already looked into this issue).

12. Section 8 Feasibility – Be sure to allow use of bioretention with under drains for managing runoff from PGIS.
13. Section 8 Feasibility – Revise, or delete entirely, the bioretention feasibility statement that says "They are not compatible with surrounding drainage system as determined by the local government (e.g., project drains to an existing stormwater collection system whose elevation or location precludes connection to a properly functioning bioretention facility)." This is a potential feasibility constraint faced by all BMPs (traditional or LID) and as written could be too easy of an "out" from the LID requirement.
14. Section 8 Feasibility – The mandatory list language refers to cost feasibility for green roofs, but the draft of Section 8.C refers to technical feasibility. Please clarify.
15. Competing Needs – Aesthetics should not be included as a competing need.
16. Enhanced Treatment – I agree with Bruce Wulkan's suggestion at the last Advisory Committee meeting that enhanced treatment should be required for discharges to saltwater bodies.
17. Disturbance Thresholds – What is the origin of the ¾ and 2.5 acre disturbance thresholds? Per Bill Derry's comments at the last Advisory Committee meeting, these do seem too high and counter to LID principles and goals. We should aggressively minimize conversions of native vegetation.
18. Code Revisions Requirements – Ecology and/or the PSP should highlight the "low hanging fruit" in the Code revision guidelines. The draft PSP guidelines are very process oriented, and may not sufficiently encourage and support action at the local level. A prioritized list of recommended areas to target (and/or easy areas to target) might further the progress on code revisions.